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The Role of Parental Involvement in School-Based Mental Health Interventions at Primary (Elementary) School Level

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Introduction

The National Institute of Health and Clinical Excellence (NICE) is a body originally set up by the UK government to provide 'arms' length' advice on the acceptability of drug and treatment regimes in medical care. It developed and extended its functions to take over the issuing of public health advice and recommendations, and is now

badged as 'an independent organisation responsible for providing national guidance on promoting good health and preventing and treating ill-health'.

This paper reports on material derived from a systematic review carried out for NICE by Shucksmith *et al* (2007) which looked at targeted mental health interventions. A similar review (Adi *et al*, 2007) was undertaken in parallel and looked at universal or whole-school interventions to promote good mental health and well-being for primary-age pupils. In addition to these two reviews, NICE also commissioned a number

A B S T R A C T

This paper looks at evidence from a systematic review undertaken for the National Institute of Clinical Excellence (NICE) in England and commissioned as a prelude to the issuing in 2008 of national public health guidance on mental health interventions at primary (elementary) school level (children aged four to 11 years). The review assessed all peer-reviewed published material in the English language that met strict quality criteria. A relatively small proportion of this material emanated from the UK itself, but all the studies included have reasonably high relevance to the UK context. This review of targeted approaches looked at studies focused on

remediating particular types of behaviour or working with particular groups of pupils, studies which addressed the factors likely to lead to poor mental health or mental disorders, and studies which included ways of identifying children at particular risk. The review provides evidence of the benefits of parental involvement in school-based attempts to respond to problems that emerge in children with a range of identified disorders. A reading of the literature involved also highlights, however, the large number of barriers and difficulties encountered in achieving full parent engagement, especially for children with serious behavioural problems.

of smaller pieces of work, including a cost-effectiveness review, an additional piece of work on violence and bullying, and a consultation with young people. Following synthesis of the results and a considerable period of consultation with stakeholder groups, the resulting guidance was published, intended for use by teachers, school governors and professionals with public health as part of their remit working in education, local authorities, the UK National Health Service (including Child and Adolescent Mental Health Services) and the wider public, independent, voluntary and community sectors.

In this paper we select a small element of that review for discussion, namely the involvement of parents in the treatment of children with conduct and oppositional defiant disorders. There is an understanding that these externalising behaviours are not usually the outcome of individual factors alone, but are multiply determined (involving, for example, child factors, parenting practices and negative school experiences) (Offord *et al*, 1992; Reid & Eddy, 1997), and might therefore require complex interventions.

Methods

Methods for undertaking systematic literature reviews for NICE are well documented on their website (NICE, 2009). In this case primary, peer-reviewed research studies were included in the review if they were written in English after 1990 and undertaken in developed countries. To be included studies had to focus on primary-age children between four and 11 years of age and to show a **targeted** approach (on a group at risk) **or** an **indicated** approach (on a group already identified as having problems). Studies were included if they were randomised and controlled, and provided that the intervention focused on behaviours that were intended to produce outcomes related to improvements in mental well-being. The definition of 'mental well-being' used was that set out in *Monitoring Positive Mental Health* (NHS Scotland, 2006). Outcomes are measured using indicators and scales relating to the main aspects of mental well-being shown below:

- emotional well-being (including happiness and confidence, and the opposite of depression)
- psychological well-being (including autonomy, problem solving, resilience and attentiveness/involvement)
- social well-being (good relationships with others,

and the opposite of conduct disorder, delinquency, interpersonal violence and bullying).

A broad definition of 'school involvement' was taken, so that interventions could reflect both the importing of 'other' professional skills into classroom/school settings, and development by teachers and school personnel of skills that could be used in mental health improvement interventions.

Primary studies were excluded if they did not cover any of the above and/or covered the following exclusion criteria:

- interventions that lasted less than one month
- interventions that took place entirely in clinic settings out of school or at home
- interventions that focused on pharmacological treatment.

A secondary sift assessed articles for quality. One reviewer assessed the quality of individual studies and a second reviewer independently checked the accuracy of the quality assessment. Disagreements were resolved by consensus, and if necessary a third reviewer was consulted. The quality of the studies was assessed according to criteria set out in the NICE Centre for Public Health Excellence Methods Manual (NICE, 2009) with certain points of clarification with respect to evaluations relating to educational settings. There is considerable difference between small trials (with small sample sizes and simple controls) and multi-component complex interventions (with much larger sample sizes and a complex range of conditions to which children are assigned). Both types of study were included and, while the latter are obviously more sophisticated, it was judged appropriate to assess each for quality as 'of their kind'.

Thirty-two primary research studies met the inclusion criteria. Interventions were categorised in relation to the types of disordered behaviour that they targeted, following the UK Office of National Statistics classification schema (ONS, 2004), itself derived from ICD10 (the international standard diagnostic classification which came into use in many WHO member states after 1994) and DSM-IV diagnostic research criteria. Psychiatric diagnoses are categorized by the Diagnostic and Statistical Manual of Mental Disorders, 4th. Edition. Better known as the DSM-IV, the manual is published by the American Psychiatric Association and covers all mental health disorders for both children and adults.

The following categorisation was used for disordered behaviour.

- Internalising behaviours (emotional disorders)
 - Anxiety disorders (e.g. separation anxiety, social phobias)
 - Mood disorders (e.g. depression, bipolar disorder)
- Externalising behaviours (conduct and hyperkinetic disorders)
 - Oppositional defiant disorder (ODD)
 - Conduct disorder (CD)
 - Attention deficit hyperactivity disorder (ADHD).

Evidence for school-based treatments or interventions aimed at less common disorders (such as autism, tics and eating disorders, as in ONS classification) did not meet inclusion criteria for school-based interventions, and these studies were thus removed at the initial screening.

Intervention strategies covered a range including training in coping skills, stress management, training in self-monitoring, normative peer work and mentoring, but there was a strong thread running throughout the programmes emphasising the techniques of cognitive behavioural therapy (CBT) and the need for social skills training.

Findings

Perhaps the most salutary finding overall was the very small number of studies (59) that met the quality and inclusion criteria invoked. After decades of activity and research we still have a very small number of studies that can deliver results of undisputed quality. Even among these it is worth noting that very few are UK-based. To a large extent this shortage indicates a very different research and academic culture, but it was judged that there were sufficient similarities between settings for many of the studies carried out in Australia and the US to have some validity in a UK context.

In relation to conduct disorders, six studies which focused only on young people were included, with a further 14 included that described multi-component studies that involved parents or other aspects that were invoked as critical in the development or remediation of such disorders. Early studies had begun to demonstrate that many simple curriculum-only interventions, while well received and occasionally giving apparent

gains in improvements in well-being, were largely ineffective at follow-up (for example Hudley & Graham, 1993; Hudley & Friday, 1996). Some studies indicated that benefits were multiplied and sustained if parents were also involved and trained to support the intervention (King *et al*, 1998). Over the period, therefore, we see the introduction of more and more multi-component programmes, with concerted attempts being made by use of different arms of the intervention testing to explore and distinguish the effect of introducing parental support and training. The ways in which parental help is sought are varied, and the size of the studies, the extent to which the intervention of parents is compared with controls and so on make any simple assessment of the effectiveness of parent involvement difficult. These latter multi-component studies, which attempt to involve parents, are thus described now in more detail to explore whether they deliver sufficient good-quality evidence to give us some purchase on assessing the claim that parental involvement is worth the effort and cost of securing it.

The work of Vitaro, Tremblay and colleagues in Montreal, Canada is significant. The Montreal Longitudinal Study of Disruptive Boys was able to follow boys from kindergarten through their school career. An early study (Tremblay *et al*, 1991) involved assessing the effects of a preventative programme carried out during the boys' early years in primary school. The study population was kindergarten males in low socio-economic areas of a large metropolitan city. Boys were assessed at six years of age by their kindergarten teachers, using an inventory developed by the authors. All boys who had a disruptive score above the 70th percentile were considered 'at risk'. These disruptive boys ($N = 319$) were randomly allocated to a treated group and two non-treated groups (a placebo group and a no treatment control). Treatment continued over two years when the boys were aged seven to nine, and consisted of parent training (in positive reinforcement for prosocial behaviour, effective punishments, etc.) and training of boys in social skills and self-control skills. Treatment was delivered by child care workers, a psychologist and one social worker, with each case worker responsible for 12 families. Case worker and family met, on average, every other week. The in-school intervention involved giving the boys two types of skills training in small groups of prosocial peers nominated by teachers. This was designed to prevent stigmatisation of the disruptive children and also so that non-disruptive pupils would act as positive models and reinforcement

agents. Lessons were delivered once a week (45-minute sessions) either in class time, lunchtime or after school.

There were no statistical differences at the end of treatment between intervention and controls for teacher ratings of disruptive behaviour, anxiety, inattentiveness and prosocial behaviour, but young people's self-ratings and long-term follow-up were more encouraging (Vitaro & Tremblay, 1994). Moreover, treatment was seen as effective as measured by long-term follow-up on a measure of school competence which looked at whether children had been placed in special classrooms or held back in school. By 1995 the authors were able to report on the boys' progress into mid-adolescence (Tremblay *et al*, 1995). The results indicated that a significantly greater percentage of treated boys remained in an age-appropriate regular classroom up to the end of elementary school, and that the boys reported significantly fewer delinquent behaviours at yearly assessments from 10–15 years old than both controls. Further follow-up studies of the same group to explore early school drop-out are hampered by low power and high error terms (Vitaro *et al*, 1999).

The results of the intervention reflect the importance of early intervention, and also of long-term follow-up in a condition that is likely to manifest itself in earnest in later adolescence. This interesting and complex intervention thus shows that treatment of parents and children together produces benefits, but the study design cannot, unfortunately, demonstrate the differential impact of including parents in the intervention.

The Incredible Years Intervention, developed and reported in the US by a group led by Webster-Stratton (Webster-Stratton *et al*, 2001), was originally focused primarily on parent training and education. Later intervention trials combined this with teacher training and child skills training, and these latter combinations demonstrate longer-term effects. Children enrolled in the programme came to the Dinosaur School clinic, which was offered in weekly two-hour sessions over six months and which addressed interpersonal difficulties that research has shown are problematic for young children who have ODD. They include lack of social skills and poor conflict resolution skills, loneliness and negative attributions, inability to empathise and understand another's perspective, and problems in communicating with peers. Treatments were CBT-based and offered by clinicians. The groupwork involved use of puppets, live and videotape modelling and role-playing, as well as practice activities and fantasy play. Homework exercises were also given.

The authors (Webster-Stratton & Reid, 2003) report the two-year follow-up of a programme which enrolled 4–7-year-old children with child conduct problems into a complex suite of treatment options comparing different mixes of teacher, parent and child training. Teacher training added significantly to long-term school outcomes for children who had pervasive behaviour problems. A further report (Webster-Stratton & Reid, 2004) suggested that each of the treatments led to expected changes in the groups at which they were targeted. Thus children in the treatment programme showed more prosocial skills than controls, and all parent training conditions resulted in more positive parenting. Adding teacher training to both the parent training and child training regimes improved treatment outcomes in terms of teacher behaviour management in the classroom and in reports of behaviour problems.

The authors concluded that a multi-component intervention offering parent, child and teacher training might be the most potent treatment for pervasive behaviour conditions. This study is based on work done in suburban settings with a mainly white Euro-American group, though the authors claim to have equally encouraging data from the Incredible Years programme being offered through Head Start schemes operating in more ethnically diverse and poorer communities (Reid *et al*, 2003).

Fast Track is a conduct-problem prevention trial that derives its intervention from the PATHS (Promoting Alternative Thinking Strategies) programme. PATHS is a universal, whole-school programme. However, in addition to the universal programme there has also been an exploration of the utility of an intensified form of the intervention with targeted or 'at risk' pupils. The evaluation of Fast Track is presented by the Conduct Problems Prevention Research Group, a collaborative research group with authors in a variety of US universities. Within the trial (Conduct Problems Prevention Research Group, 1999) more than 9000 kindergarten children were screened at four sites and in three cohorts. Eight hundred and ninety-one were identified as high risk (by virtue first of living in areas of high crime and poverty, and second on the basis of teacher-parent ratings of disruptive behaviour at home and school) and then randomly assigned to intervention or control groups. From Grade 1, high-risk children and their parents in the intervention group were asked to participate in a combination of social skills and anger-control training, academic tutoring, parent training and home visiting. A universal classroom programme was delivered

to the core schools they attended. The intervention for the Fast Track group involved attendance at a two-hour enrichment programme held at the school building after school or at weekends once a week. Since earlier studies had shown poor parent involvement because of various barriers like the need for childcare for siblings or transport problems, provision of childcare and transport was included as an inducement to attendance. Parents were also paid \$15 for each session they attended. At the enrichment session children attended a 'friendship group' where they learned and rehearsed social skills using role modelling, discussions, stories and films. During this same hour parents met in a group led by family co-ordinators to discuss parenting strategies that would improve child behaviour. After the parent and child groups, parent-child pairs spent 30 minutes together each session, participating in positive co-operation activities and practising positive parenting skills with staff support. During the last 30 minutes children worked with paraprofessional support staff on their reading skills, while parents observed. At the end of the first year there were moderate positive effects on children's social, emotional and behavioural skills, improvement in peer interaction and fewer conduct problems.

At the three-year follow up (Conduct Problems Prevention Research Group, 2002), teacher ratings of conduct problems and official records of use of special education resources at the end of third grade gave modest effect-size evidence that the intervention was preventing conduct problem behaviour at school compared to controls. Parent ratings provided evidence for improvement at home. A further paper (Conduct Problems Prevention Research Group, 2004) addresses the question of the benefits of the intervention in the 4th and 5th grades of elementary school. The overall conclusion is that Fast Track had continued to influence certain key areas of children's adjustment throughout elementary school, reducing the likelihood that children would emerge as 'cases' with problems in their social, peer or home functioning. Treated children were less likely to be involved in deviant peer groups. However, the hypothesis that Fast Track would improve the young subjects' academic and behavioural performance at school was not supported. The project continues to track the children through their transition into high school.

Overall, Fast Track is clearly 'work in progress', but for an intervention which is so intensive and costly, the gains appear modest at this stage. An interesting question not answered in the report is the extent to

which the results are diluted by the proportion of 'false positives' – children identified as 'at risk' in kindergarten on the basis of teacher and parent ratings, but who by grade 1 show no signs of serious behaviour problems.

Early Risers is a programme developed within a research group led by August in the US. Four papers from this research group were included in the review (August *et al*, 2001, 2002, 2003a, 2003b). The programme aims to alter the developmental trajectory of children with early-onset aggressive behaviour and, again, is a complex multi-component intervention which features a summer school programme, a teacher consultation and student mentoring programme, and parent skills training groups and child social skills groups. Subjects were recruited via a screening programme based mainly on teacher ratings carried out across 10 matched kindergarten schools in a semi-rural area of Minnesota. Children identified as 'high risk' were invited to participate and were then allocated to condition according to school (five schools were allocated as intervention and five, matched on socio-demographic criteria, as control). A sample of children from the same schools was chosen to serve as normative participants (no intervention).

The intervention took place over two years. Children received the main intervention at an intensive six-week summer school held at four elementary schools in the region. Social skills training was coupled with creative arts/sports training and recreational activities. During the rest of the year, Early Risers family advocates served as consultants to the 10 programme schools, making weekly visits to review student progress and give advice where requested regarding potential interventions that might be useful for individual students.

Results at the end of the intervention showed gains for intervention children on a composite academic achievement score compared to controls, but no significant group differences on composite scores for behavioural self-regulation, social competence or parent investment. Further exploratory analyses, however, showed that the effectiveness of the intervention in these domains might be limited to certain subgroups on the basis of their behavioural severity and the amount of attention received (intervention dosage), since not all parents had been fully compliant and attended regularly. Thus the recommended level of family support contact time was associated with gains in concentration problems and social skills for children, parents of severely aggressive children showing greater reductions in parent distress.

After a further year's intervention the authors report (August *et al*, 2002) significantly more success. Intention to treat analyses revealed that programme participants after three years of intervention showed greater gains than controls in social skills, academic achievement and parent discipline, with mean scores in the normative ranges on the last two constructs. Parents and teachers rated programme children as having more positive social skills than control children. The difference in social skills (which had not been evident at the two-year level) attests, in the authors' opinion, to the need for continuous intervention efforts or booster supplements when targeting at-risk children. However, no programme versus control differences were observed in children's aggression, hyperactivity and impulsivity.

A report by the same group after four years of intervention (August *et al*, 2003b) found that programme children obtained higher scores on leadership and social etiquette, and chose friends with lower aggression. On other variables, such as aggressive peer reputation, likeability, social preference, social impact and number of mutual friendships, there were no differences between programme and control children. Overall, therefore, Fast Track studies reported in the round show relatively small improvements for the inclusion of family involvement, a fact that may well be due to variable patterns of attendance and compliance among participating parents. Where sub-analyses are carried out which attend to this aspect, better rates of improvement are shown as the 'dosage' increases.

The issue of 'dosage' is deliberately tested in a series of studies reported by Lochman's US-based research group. In the 1980s (before the start of our review period) Lochman developed and refined a cognitive-behavioural school-based intervention that focused on developing anger-management skills in aggressive elementary and middle school aged boys. A set of 18 sessions taught affect identification, self-control and problem-solving skills. Early outcomes were in terms of observed lower levels of disruptive and aggressive classroom behaviour in intervention groups, but this difference was not maintained at a seven-month follow-up or at a three-year follow-up.

Five papers from this group post 1990 are included (Lochman, 1992; Lochman *et al*, 1993; Lochman & Wells, 2002, 2003, 2004). By this period the group had developed an intervention which targeted families as well, in an effort to improve the effects on behaviour. The intervention was in part directed at parents and at teachers, and designed to have ecological influence

on the social bonds between home and school, child and school, and parent and child, in the hope that it would ultimately prevent substance abuse and induce improvements in the four predictor variables (social competence, self-regulation, school bonding and parental investment) compared with randomly assigned comparison children and families. The universal Middle School Transitions Program included parent and teacher meetings to promote parent involvement and address parental concerns. The additional targeted Coping Powers programme effectively 'doubled the dose' for children in one arm of the trial.

The utility of the intervention was most evident with adolescent substance use. Three years after the end of the intervention, when the boys were in mid-adolescence, those high-risk boys who had received the intervention displayed lower levels of substance use than did boys who were at similar levels of initial risk but who had not received the intervention. The cognitive-behavioural intervention had no overall effect on adolescents' classroom behaviour, and the authors speculate on the necessity for longer, more sustained interventions with booster programmes, and also for family involvement.

Subsequent papers look at the effectiveness of the Coping Power programme in different settings or with different groups. Lochman and Wells (2002) look at the use of the programme at the middle school transition. Children were identified as being 'at risk' on the basis of 4th grade teacher ratings of aggressive/disruptive behaviour and assigned randomly to the Coping Power programme, the universal intervention (a Coping with the Middle Schools Transition Program offered to all pupils), a combined universal and Coping Power intervention or a control condition. The Coping Power condition this time included both parent and child components. All three of the intervention conditions had a positive effect in reducing adolescent substance use uptake. Biggest effects were for the combined universal and targeted Coping Power programme, and the authors conclude that nesting preventative interventions for high-risk children within universal programmes may be the most effective way forward. A one-year follow-up (Lochman & Wells, 2003) found that the combined universal and indicated approaches had also reduced school aggression one year after the intervention was completed.

Building on this theme that 'dosage' is important and that – for the most disturbed children – universal programmes need to be 'topped up' with targeted programmes which involve family members, the

Metropolitan Area Child Study Research Group (2002) in the US reports a very lengthy and complex multi-year, multi-component aggression prevention programme provided in inner city and other urban poor communities. The study spanned eight years and eight cohorts. Sixteen elementary schools were assigned to one of four conditions: no treatment control, general enhancement classroom programme, general enhancement plus small group peer skills training, or enhancement plus small group skill training plus family intervention. The study was interested in evaluating the effects on aggression and achievement of three levels of a cognitive-ecological preventive intervention for children living in these circumstances, plus other important aims related to the timing of intervention and to school and community resource constraints. The hypothesis was that the general school programme would improve academic achievement, but that only the more intense interventions would improve or prevent aggression among at-risk groups. They also expected results to be greater when the intervention was offered early. This paper reports on results for a high-risk sub-sample of children ($N = 1500$). To test for the importance of developmental timing of interventions, level A, B and C interventions were delivered at three stages: Grades 2–3, Grades 5–6 and at both grades.

Results indicate that comprehensive interventions can be effective for children in schools in settings with resources adequate to support learning and development, but some unintended results can occur in schools in the most distressed communities when delivered too late in development; namely, the general enhancement plus small group intervention appeared to lead to maintenance of high levels of aggression when administered later in development in inner city communities. Such effects have been attributed to ‘at risk’ youths promoting negative norms and beliefs about aggression or delinquency – a form of ‘deviancy training’ that provides reinforcement for aggression.

The most significant results occurred when the comprehensive intervention was offered early, and these effects were doubled when it was followed by an additional booster two-year intervention in grades 5 and 6. None of the interventions was effective in preventing aggression among older elementary school children. These studies experienced significant problems in terms of drop-out of the most troubled children and families. In addition, significant ‘school effects’ were evident, and the variance accounted for by schools may reflect characteristics of the schools themselves.

The authors concluded that it is more important to examine ‘what works best for whom and in what circumstances’ than to look for an answer to the simpler question of ‘what works’. A set of complex and costly studies which attempted to elaborate the effects of dosage and parent involvement with point of treatment was thus ultimately somewhat inconclusive in what it had to tell about parent involvement.

A number of smaller interventions also address CD and ODD problems using methods which simultaneously target both young people and their parents. Weiss *et al* (2003) describes a randomised controlled trial which provided a targeted intervention (Reaching Educators, Children and Parents – RECAP) for children experiencing internalising and externalising problems. An ethnically mixed group of 4th grade boys and girls were recruited to give a sample in the intervention group of 62 and a control group of 31. Members of the 93 families of all youngsters were also recruited. Young people in the intervention group were given a skills training programme individually, in small groups, and classroom-wide. Skills training programmes were also administered to teachers and parents. The control group received no treatment. All training was delivered by social workers and psychiatric nurses and lasted for the nine months of the school year. Skills training was similar to that described for other programmes, including training in social skills, re-attribution of others’ hostile intentions, communication skills, and affect recognition and expression. Results from the intervention show limited effect, and even where statistically significant improvements in outcome measures were noted, children often still lay outside the normal range. The research design is not a sophisticated one because the control was simply ‘no treatment’. In evidence terms this would be classed as offering less rigour than a study where the control was an alternative treatment, for example, since an effect might simply be produced by recruiting people into a treatment programme and giving them additional attention, regardless of what was involved.

Barkley and colleagues (2000) used annual pre-school screenings at kindergarten to identify 158 children with high levels of hyperactive, impulsive and aggressive behaviour. They were assigned to four treatment conditions lasting the school year: no treatment, parent training only, full-day treatment classroom only, and combination of parent training and classroom component. The parent training programme used methods and content similar to those described by Webster-

Stratton (above). It consisted of 10 weekly sessions followed by monthly booster sessions for five months and was delivered by a specialist in the evenings at a medical centre. The children's intervention took place in a special treatment classroom in an ordinary school. Full-time schooling took place in these classrooms. The intervention plus an accelerated curriculum was delivered by relief teachers and teaching assistants trained by a teaching specialist and a psychologist. The intervention consisted of multiple behavioural interventions and intense academic coaching. For children entering Grade 1 the teaching and psychology specialists provided teacher consultations. Results showed that parent training produced no significant treatment effects, probably owing, as the authors acknowledge, to poor attendance. Classroom treatment produced effects in multiple domains relating to aggression, behaviour and social skills (on the basis of teacher and parent ratings and on observation data). However, the intervention had no effect on academic achievement skills or on ratings of home behaviour. Most treatment effects were therefore specific to the school environment.

Barrera and colleagues (2002) focused on a US sample with a large proportion of Hispanic children selected from three communities for aggressiveness or reading difficulties. Children were then randomly assigned to an intervention or no intervention control condition. Intervention families received parent training (using a curriculum developed from the Incredible Years programme and translated into Spanish for the benefit of Hispanic families) and children received social behaviour interventions (again, using instruments and programmes like the Diana Dinosaur suite) and supplementary reading instruction over a two-year period. At the end of the intervention treated children were observably less negative in their social behaviour than controls. At a one-year follow-up treated children showed less teacher-rated internalising and less parent-rated coercive and anti-social behaviour than controls. Interestingly, the intervention was as successful in decreasing conduct problems for Hispanic children as it was for European American children. This gives some credibility to claims that the materials and methods are highly transferable or generalisable.

Braswell and colleagues (1997) screened 1st to 4th graders in 22 US elementary schools in a suburban area, to locate a sufficient sample with disruptive behaviour. Their eligible sample (309 subjects) participated in a multi-component competence enhancement intervention (MCEI) or an information/attention control

(IAC) condition over a two-year period. The intervention used a similar programme to that developed by Tremblay *et al* (above). Three test points were undertaken but assessments were not supportive of the efficacy of the MCEI over control condition. Children in both groups rated themselves as improved in terms of increased adaptive skills and decreased school problems, but teacher and parent ratings of externalising behaviour did not yield evidence of positive change. The authors conclude that maturation rather than treatment may explain the observed positive changes in child self-ratings.

Waschbusch and colleagues (2005) conducted a trial that randomly allocated four US elementary schools to four conditions that aimed to compare the benefits of universal versus targeted programmes. More than a thousand children were involved between the ages of four and 12 over the course of one school year. The four conditions were a school-wide intervention that incorporated universal and targeted treatment, a targeted school intervention delivered to individual students in regular and special education classrooms, a targeted home intervention delivered in home and regular classroom settings, and finally a control condition that did not receive a designated intervention. Results showed that the behaviour of disruptive children in all schools improved during the course of the year, with some evidence that interventions provided complementary effects. Part of the focus of this intervention was to explore the preference of parents for treatment modes. The take-up rate for the targeted interventions, in contrast with the universal or school-wide intervention, was much higher where the intervention was given at school rather than at home. Similarly, relatively few parents took advantage of the parenting programme that was offered as part of the intervention, despite the fact that it was free, offered at multiple times, included child care and was based on well-thought-of programmes.

O'Donnell *et al* (1995) describes a six-year US school-based prevention programme which modified classroom teacher practices, offered parent training and provided child social-skill training. The classroom intervention involved training teachers in proactive classroom management, interactive teaching and co-operative learning methods. Length of training was not specified. The child intervention consisted of Grades 1 and 6 cognitive and social skills training from classroom teachers and, in Grade 6, refusal skills training for four hours. The parent intervention was offered to parents of children in Grades 1–3, 5 and 6, but was attended

on a voluntary basis, was delivered by project staff and involved seven sessions on behaviour management in Grades 1 and 2, four sessions on helping your child academically in Grades 2 and 3, and five sessions on anti-social behaviour prevention in Grades 5 and 6. Compared to a low-income control group, children in the intervention group showed enhanced school commitment and class participation. Girls in the group showed lower rates of substance use in adolescence, and boys showed increased social and schoolwork skills.

Fraser and colleagues (2004) report on a US multi-component intervention designed to disrupt developmental processes associated with conduct problems and peer rejection in childhood. A social skills training programme was used with 45 children in an intervention condition, comparing them to a waiting list control (a relatively weak design). The home component involved giving 15 lessons for parents on child development, parent-child communication, family problem-solving and child discipline. The school component involved 30 lessons for children on social cognition and skills. Compared with the control group, children in the intervention showed improvement on five of six outcome measures, but this could of course have been due to attention effects. In particular, intervention children showed increases in cognitive concentration in the classroom and were less relationally aggressive with peers.

Atkins and colleagues (2006) studied the effectiveness of a US school-based mental health service model, PALS (Positive Attitudes toward Learning in Schools). Working in three high-poverty elementary schools in urban areas, it focused on increasing initial and ongoing access to services, and promoting improved classroom and home behaviour for children referred for disruptive behaviour disorders. Classrooms were randomly assigned to either PALS or a referral to a neighbourhood mental health clinic, and children were identified by teacher referral and follow-up interview. Class-wide behaviour management strategies were delivered by PALS staff. Class-wide methods to be used by the teacher included increased praise and reward, and reduced punishment and criticism. Targeted reward programmes for 'high-need students' were supplementary to class-wide interventions. For parents of at-risk children, increased access to school and interaction with school were encouraged, and specific parenting strategies taught. A promising study was disrupted by high attrition rates and problems at the researchers' institution. Results indicated significant service user

engagement and retention for PALS ($N = 60$) versus families referred to clinic ($N = 30$), with over 80% of PALS families retained in services for 12 months.

Discussion

Early studies, conducted before the period covered by this review (1991 onwards), often targeted only children themselves in a school setting, and showed that any effects of intervention were weak and often not sustained. Since onset and development of conduct disorder are thought to be multiply determined (for example by child factors, parenting practices and negative school experiences), it is reasoned that preventative interventions must also be comprehensive and target multiple risk and protective factors. A series of complex multi-component interventions sustained over long periods has thus been mounted and evaluated extensively. In cost terms the gains for children from these huge inputs still look sparse, in terms of school performance, teacher ratings and so on, but supporters continue to claim that the investment may be recouped in later years (a sleeper effect) as young people are averted from lives of delinquency and drug abuse.

A significant number of studies point to the fact that parent training (such as that involved in the Incredible Years schemes) is associated with more positive parenting. Where parents are involved in this and other schemes, their relations with their children seem to improve and their regard for their children also improves. Teacher ratings for children's behaviour also improve, though this is not necessarily seen through in better cognitive or learning outcomes for children in school.

A number of studies point to the screening problems inherent in identifying an 'at risk' population for targeting at such a tender age. Significant numbers of 'false positives' appear to emerge from teacher and parent ratings. Not all evaluations are structured to allow the reader to discern which of the components has the greatest effect on outcomes so, although we sense that parent involvement is significant, it is still difficult to measure just how important that contribution is. The involvement of parents in such programmes also takes many forms. In many cases it is clear that parents are given remedial advice to improve parenting skills, for example better ways to interact with and respond to children's behaviour, and modelling of ways to encourage children's academic and social progress. In others, parental involvement seems more transitory.

Studies are poor at reporting compliance or level of attendance, so it is hard to assess what level of 'dose' is necessary or significant to achieve an improvement. A number of studies point to the benefit of 'nested' interventions, where targeted parent and child interventions are used to supplement or add value to more broadly based whole school programmes. The mystery ingredient of 'parent involvement' is not necessarily in itself the 'silver bullet' that transforms an intervention into a success, and more analysis is required to determine which facets of such involvement really make the difference for children with these conditions.

Recruitment into parent programmes (and retention thereafter) is clearly a major challenge, even when every effort is made to make access easy (for example by providing transport or offering service in the parent's own home) or when a financial inducement is offered. Given a choice, evidence from Waschbusch and colleagues (2005) indicates that parents may prefer targeted children to be treated at school rather than at home. The way in which these studies are reported gives little indication of how parents felt about recruitment of their children or themselves into such programmes. We do not know if they felt stigmatised by involvement or pressured to comply, but many clearly 'voted with their feet' subsequent to enrolment in the trial. We know less about whether this reluctance contributed in any way to their undermining the impact of the intervention with the children. There is thus a need for an examination of the literature on community development approaches to improving recruitment and retention of parents of targeted or indicated children, though it is likely that most of it would be qualitative in style and would need to be reviewed in a different way.

The guidance eventually issued by NICE (2008) as a consequence of this review (and the others alluded to earlier) starts from the premise that children's social and emotional well-being is important not only in its own right, but also because it affects their physical health (both as a child and as an adult) and can determine how well they do at school. Good social, emotional and psychological health helps protect children against emotional and behavioural problems, violence and crime, teenage pregnancy, and misuse of drugs and alcohol. Recommendations to schools are that they implement whole-school approaches to promoting good mental health and that they work in close arrangement with mental health services to provide 'stepped care' arrangements for those children and families who need support. The report also recommends training for teachers

so that they can identify children at risk or showing early symptoms of poor mental health, and development of better in-school systems for liaising with mental health services. Where children have been targeted or indicated as being vulnerable, interventions can be at a one-to-one or group level and should involve parents.

In coming to these conclusions the guidance notes some serious gaps in the literature. They included, among other things, a lack of UK evidence and a serious dearth of information on the cost-effectiveness of interventions, but the report also noted the following.

There is a lack of evidence on effective ways to involve the parents or carers of primary schoolchildren in school-based programmes to improve their children's emotional and social well-being. Evidence is particularly needed on how to engage parents or carers from disadvantaged backgrounds. (NICE, 2008 p45)

Perhaps it is unrealistic for such interventions to anticipate huge gains from including parents in the remedial mix. Most such interventions are about 'fixing' the child and the parent, and do not attempt to address the multiplicity of disadvantageous factors which have helped to promote the problems in the first instance and which carry on in the background of affected children's lives. Again, the systematic review was too narrowly defined to look at the broader structural ways in which improvement in outcomes for children might have been attempted. All the interventions studied were school-based, but only rarely tackled aspects of the school milieu, let alone the broader social world beyond the school.

Overall the authors of this systematic review were not impressed by the level of evidence emerging from 20 years of research on ways of improving the well-being and outcomes for troubled young people with conduct disorders, especially with regard to the value of working with parents to enhance the efficacy of such programmes. Suggestions for improvements to study design can clearly be made from listing the shortcomings of some of the studies discussed here, but such an approach increasingly begins to look like the 'one-two punch' described by Davis-Floyd (1994) which:

destroys a natural process then rebuilds it as a cultural process that values science and technology over nature (Davis Floyd, quoted in Keleher *et al.*, 2007).

Attempts to 'fix' troubled youngsters and their families

look like technocratic solutions to problems that would be better addressed by more upstream public health approaches.

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